

KRAVCHENKO, A. I.

Methods for determination of enolization of carbonyl compounds in the presence of alkali. A. I. Kravchenko (Leningradsk. Pedagog. Inst.). J. Gen. Chem. (U.S.S.R.) 16, 673-6 (1946). Comparison of the rate of oxidation of ketones in mono- and dibasic alkalies appears to show that the rate depends on the concn. of OH^- ; thus, oxidation in $\text{Ba}(\text{OH})_2$ is more rapid than in $\text{Ca}(\text{OH})_2$. On this basis the enolization of ketones is established in the following decreasing order: Me_2CO , AcPh , butanone, cyclohexanone, MePhCO , and EtCO . Since aldehydes oxidize rapidly even in neutral solns, the use of this method is limited to ketones. G. M. Kozolupoff

CA

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Hydrolysis of esters of organic acids. I. Hydrolysis of esters of monocarboxylic acids. A. I. Kravchenko and V. K. Puzova (Krasnoyarsk State Pedagog. Inst.). *Zhur. Khim. Akad. (J. Gen. Chem.)* 20, 2070-9 (1950). Decomposition rate constants, k (min.⁻¹ mole⁻¹) were determined for the following hydrolysis reactions (at 17-18°): with NaOH 0.4 N, in 60% EtOH, BuOR 0.021; BuOMe 0.034; iso-PrCO₂Et 0.068; AcOAm 0.344; in H₂O, BuOR 0.0077; BuOMe 0.044. Further, with NaOH 0.18 N, in 60% EtOH: AcOR 0.223; AcORu 0.243; AcOAm 0.083; iso-PrCO₂Et 0.031; (AcO)₂CH₂ (triacetic) 0.344 (0.116 per carboxyl group). HCO₂Et was hydrolyzed to the extent of 98.2% in 5 min. N. Thon

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CA

Hydrolysis of esters of organic acids. I. Hydrolysis of
esters of monocarboxylic acids. A. I. Kravchikov and V. E.
Penzova (Krasnoyarsk State Pedagogic Inst.). *J. Gen.
Chem. U.S.S.R.* 20, 2149-52 (1950) (Engl. translation).--
See *C.A.* 45, 2200c. B. L. M.

Kravchenko A.I.

USSR/Kinetics - Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18602

Author : A.I. Kravchenko.

Inst : Krasnoyarsk State Pedagogue Institute. T. State University.

Title : Oxidation of Alcohols and Ketones by Potassium Permanganate in Presence of Catalysts.

Orig Pub : Uch. zap. Krasnoyar. gos. ped. in-ta, 1956, 5, 159-165

Abstract : The kinetics of oxidation of isopropyl (I), n-butyl (II) and izobutyl (III) alcohols in neutral, acid and alkaline solutions, as well as the oxidation kinetics of ketones acetone (IV), butanone (V) and acetophenone (VI) and II in neutral solutions in presence of Na_2CO_3 or K_2CO_3 , by KMnO_4 at 17 to 18° were studied. The oxidation speed ratio in alkaline, acid and neutral solutions is as follows: for I - 29.7 : 1.71 : 1; for II - 24.30 : 29.89 : 1.17; for III - 23.36 : 27.62 (the speed in neutral solutions has not been determined). The oxidation speed

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USSR/Kinetics - Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18602

ratio in presence of Na_2CO_3 , K_2CO_3 in neutral solutions is as follows: for IV - 909.8 : 90.98 : 1; for V - 290.4 : 223 : 1; for VI - 258.9 : 91.5 : 1; for II - 1.8 : 1.4 : 1. The acceleration of oxidation of ketones in presence of alkaline salts is explained by their enolization. The oxidation acceleration of I in presence of an alkali is explained by the formation of an intermediate product (ketone) and its enolization (A.I. Kravchenko, Tr. IGU, 1938, 94, 55-73). It is proposed to use the difference of oxidation speed of primary and secondary alcohols in acid and alkaline solutions for the qualitative determination of primary and secondary alcohols.

Card 2/2

- 247 -

AUTHORS: Sergiyevskaya, S. I., Levshina, K. V., SOV/79-28-7-24/64
Chizhov, A. K., Gavrilova, A. I., Kravchenko, A. I.

TITLE: N-Di(Ethyl Chloride) Amines of the Alicyclic Series. I(N-Di
(khloretil) aminy alitsiklicheskogo ryada. I)

PERIODICAL: Zhurnal obshchey khimii, Vol 28, Nr 7,
pp. 1839 - 1845 (USSR)

ABSTRACT: The authors discuss the synthesis and some properties of the
dichloroalkylamines of the cyclopentane-, cyclohexane- and
cycloheptane series. They synthesized the compounds of two
types: In the one (Formula I) the di(chloroalkyl) amino group
is directly bound to the carbon of the nucleus, and in the
other to the carbon of the side chain (II). The compounds of
type (II) are alicyclic derivatives of methyl-N-bis (ethyl
chloride) amine which is of importance for medicine. The two
methods used most were employed for the synthesis of N-di(ethyl
chloride) amine: according to the one [=(a) of Table 1] the
ethylene oxide reacts with the amino compounds, according to
the other [=(b) of Table 1] the compounds containing halogens
are caused to react with diethanol amine. The final stage, i.e.
the substitution of the hydroxyl groups by chlorine is the same

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N-Di(Ethyl Chloride) Amines of the Alicyclic Series. I SOV/79-28-7-24/64

for both methods, according to the specific characteristic features of the N-di(oxyethyl)amines. The synthesis of the dichloro-alkyl amines of type (I) had to be carried out according to method (a). The necessary alicyclic amines as initial products had been obtained in the cyclopentane- and cycloheptane series by the reduction of the ketone oximes, and in the cyclohexane series by the catalytic hydration of the aromatic amino compounds. The chloro-methyl derivatives of the same alicyclic hydrocarbons served as initial products for the synthesis of the compounds of type (II). The chloro-methyl cycloalkanes were obtained according to the reaction scheme mentioned. Thionyl chloride served as chlorination agent (I and II)(substitution of hydroxyl by chlorine). There are 2 tables and 8 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze (All-Union Scientific Chemical and Pharmaceutical Institute imeni S. Ordzhonikidze)

Card 2/3

N-Di(Ethyl Chloride) Amines of the Alicyclic Series. I SOV/79-28-7-24/64

SUBMITTED: February 7, 1957

1. Dichloroalkylamines--Synthesis
 2. Dichloroalkylamines--Properties
 3. Cyclic compounds--Molecular structure
 4. Ethyl chloride amines
- Chemical properties

Card 3/3

KRAVCHENKO, A.I.

Experimental studies on some bicyclic bis-(B-chloroethyl) amines.
Vop. onk. 9 no.10:35-39 '63. (MIRA 17:12)

1. Iz laboratorii eksperimental'noy khimioterapii opukholey (rukovo-
ditel' - doktor med. nauk V.A.Chernov) ot dela khimioterapii (rukovo-
ditel' - prof. G.N.Pershin) Vsesoyuznogo nauchno-issledovatel'skogo
khimiko-farmatsevticheskogo instituta imeni S.Otdzhonikidze. Adres
avtora: (Moskva, G-21, Zubovskaya ul. d.7, Vsesoyuznyy nauchno
issledovatel'skiy khimiko-far-matsevticheskiy institut Imeni S.
Otdzhonikidze).

KRAVCHENKO, A. I.

"Alkoxy Derivatives of Benzil-di (B-Chlorethyl) Amine in the Experimental Chemotherapy of Tumors." Cand Biol Sci, All-Union Sci Res Inst of Pharmaceutical Chemistry imeni S. Ordzhonikidze, Min Higher Education USSR, Moscow, 1955. (KL, No 12, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

KRAVCHENKO, A. I.

Alkoxy-derivatives of benzylbis(2-chloroethyl)amines in experimental chemotherapy of cancer. A. I. Kravchenko. *Voprosy Onkologii* 1, No. 6, 84-84 (1956).—The toxic and anticancer properties were studied of the following 9 derivs.: 1) lymphamine [benzylbis(2-chloroethyl)amine-HCl]; 2) P_1 , paroxalon, p -methoxy deriv.; 3) P_1 , o -methoxy deriv.; 4) P_1 , m -methoxy deriv.; 5) P_{11} , p -ethoxy deriv.; 6) P_{11} , p -propoxy deriv.; 7) P_{11} , p -isopropoxy deriv.; 8) P_{11} , p -butoxy deriv.; 9) P_{11} , 4-methoxy-3-nitro deriv.; eubichline [methylbis(2-chloroethyl)amine-HCl] was used as the key compd. for comparison. Corresponding structural formulas and toxic and cumulative results are presented in several well arranged tables. Various doses were administered intravenously to white mice, 16-20 g., and white rats, 90-110 g. Results of toxicity were recorded in terms of L.D.₅₀, L.D.₀₁, and M.L.D. On the basis of exptl. toxicity results the compds. were divided into 2 groups. Group I consisted of compds. characterized by long side chains in the para position of the benzene nucleus; group II consisted of those compds. which are characterized by the position, no., and type of substituents in the benzene nucleus. The anticancer properties were studied against sarcoma 45 with the aid of the activity coefficient, $C_a = 100\% - (a/b \times 100)/$

a_1/b_1 , in which a = av. wt. of the tumor; b = av. wt. of the exptl. animal including the tumor; a_1 = av. wt. of the control tumor; b_1 = av. wt. of control animal including the tumor. A pos. C_a value indicates a degree of arrest in the tumor growth; a neg. C_a value indicates increased rate of tumor growth as compared with the control, the value of which in the absence of external influences (theoretically ideal conditions) is normally 0. The detn. of the effect of the activity of the compds. was made on the basis of the general appearance of the animal, its behavior, and by the in-

Kravchenko, A.I.

crease in the body growth coefficient $C_k = (c/d \times 100) / (c_1/d_1 - 100)$, in which c = av. wt. of the expt. animal at the end of the expt.; d = av. wt. of the animal at the beginning of the expt.; c_1 = av. wt. of the control animal less the wt. of the tumor; d_1 = av. wt. of the control animal at the beginning of the expt. A pos. C_k indicates increase in the

growth of the animals and a negative-loss in wt. as compared with the control groups. All the deriv. compds. proved less toxic to white mice and rats than the parent compd. embichine. Furthermore, a) the increase in the length of the alkoxoxy group in the para position of the benzene nucleus reduced the toxicity of the compd. to the test animals; b) of the p -, o -, and m -methoxy derivs. the most toxic proved to be the para isomer (P_1) and the least toxic the meta isomer (P_2); c) the introduction of a second methoxy group into the meta position (P_{11}) of the benzene ring increased the toxicity of the compd. as compared with p -methoxybenzylbis(2-chloroethyl)amine (P_1); replacing it with a nitro group lowered its toxicity (P_{11}). In the therapeutic tests with rat sarcoma 45 derivs. P_1 , P_{11} , and P_{11} were most effective. Deriv. P_1 was less toxic than embichine and possessed more effective anticancer properties; it brought about complete absorption of the sarcoma 45 in 40-50% of the test animals. However, in toxic and in tolerance doses P_1 is accompanied by the development of marked leucopenias, resembling embichine in this respect. This depressing effect on lymphopoiesis appeared to be the only strongly unfavorable property of P_1 .

B.S.Lavine

2/2

KRAVCHENKO, A.I.

Cytotoxic activity and toxicity of certain alicyclic β -chloroethylamines under experimental conditions [with summary in English]. Vop.onk. 4 no.1:17-23 '58. (MIRA 11:4)

1. Iz laboratorii eksperimental'noy khimioterapii opukholey (rukovoditel' laboratorii - V.A.Chernov) otdela khimioterapii Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta (zav. otdelom - prof. G.N.Pershin). Adres avtora: g. Moskva, Zuhovskaya ul., d.7, Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S.Otdzhonikidze.

(NITROGEN MUSTARDS,

alicyclic, anti-tumor eff. & tox. (Rus))

KRAVCHENKO, A.I.

Mitotic activity of cells in certain transplantable mouse sarcomas.
Vop.onk. 5 no.3:329-332 '59. (MIRA 12:12)

1. Iz laboratorii eksperimental'noy khimioterapii opukholey (ruko-
voditel' - kand.biol.nauk V.A. Chernov) otdela khimioterapii (ruko-
voditel' - prof. G.N. Pershin) Vsesoyuznogo nauchno-issledovatel'-
skogo khimiko-farmatsevticheskogo instituta im. S. Ordzhonikidze.
Adres avtora: Moskva, Zubovskaya ul., d. 7, Vsesoyuznyy nauchno-iss-
ledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhoni-
kidze.

(SARCOMA, exper.

mitosis in transplatable mouse sarcoma (R_{us})

(CELL DIVISION

same)

(NEOPLASMS, exper.

same)

KRAVCHENKO, A.I.; GRUSHINA, A.A.

Antitumor activity of chlorambucil in an experiment. Vop.onk.
7 no.5:72-77 '61. (MIRA 15:1)

1. Iz laboratorii eksperimental'noy khimioterapii opukholey
(rukovod. - kand.biol.nauk V.A. Chernov) Otdela khimioterapii
(zav. - prof. G.N. Pershin) Vsesoyuznogo nauchno-issledovatel'-
skogo khimiko-farmatsevticheskogo instituta imeni S. Ordzhonikidze.
(CHLORAMBUSIL)

KRAVCHENKO, A.I.; KHRAMCHENKOVA, S.P.

Antineoplastic activity of alkoxy derivatives of p'-bis
(β -chloroethyl)-aminomethyl-azobenzene. Vop.onk. 7 no.12:19-
26 '61. (MIRA 15:1)

1. Iz laboratorii eksperimental'nykh khimioterapii opukholey
(rukovod. - kand.biol.nauk V.A. Chernov) otdela khimioterapii
(rukovoditel' - prof. G.N. Pershin) Vsesoyuznogo instituta
im. S. Ordzhonikidze.
(AZO COMPOUNDS) (CYTOTOXIC DRUGS) (ALKOXY GROUPS)

KRAVCHENKO, A.I.

Antitumor activity of some derivatives of bis(beta-chloroethy.)-aminomethylazobenzene. Vop. onk. 9 no.11:18-22 '63.

(MIRA 18:2)

1. Iz laboratorii eksperimental'noy khimioterapii opukholey (rukovoditel' - doktor med. nauk V.A. Chernov) Otdela khimioterapii (rukov.- prof. G.N. Pershin) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni Ordzhonikidze. Adres avtora: Moskva, G-21. Zubovskaya ul., 7, Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut.

KRAVCHENKO, A.Kh.

Odessa Fumigation Unit. Zashch. rast. ot vred. i bol. 9 no.1:47-
48 '64. (MIRA 17:4)

1. Nachal'nik Odesskogo fumigatsionnogo otryada.

MIRONOV, V.F.; KRAVCHENKO, A.L.

Relative electronegativity of germanium and silicon in organic compounds. Izv. AN SSSR. Ser.khim. no.9:1563-1570 S '63.

(MIRA 16:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

(Silicon organic compounds--Electric properties)

(Germanium organic compounds--Electric properties)

MIRONOV, V. F.; KRAVCHENKO, A. L.

Cleavage of silicon-containing organoaluminum compounds by
aluminum bromide. Izv AN SSSR Ser Khim no. 4:768-770 Ap '64.
(MIRA 17:5)

1. Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR.

KARTSEV, G.H.; SYRKIN, Ya.E.; KRAVCHENKO, A.I.; MIRONOV, V.F.

Dipole moments of some germanium organic compounds. Zhur. strukt.
khim. 5 no.3:492-493 My-Je '64. (MIRA 18:7)

1. Moskovskiy institut tenkoy khimicheskoy tekhnologii imeni
M.V. Lomonosova.

L 53712-65 EWT(m)/EPF(c)/EPR/ENP(j)/EWA(c) Pc-4/Pr-4/Ps-4 RPL WW/RM
 ACCESSION NR: AP5017167 UR/0192/64/005/004/0639/0639

AUTHOR: Kartsev, G. N.; Syrkin, Ya. K.; Kravchenko, A. L.; Mironov, V. F.

TITLE: Dipole moments of trimethylhalogermane

SOURCE: Zhurnal strukturnoy khimii, v. 5, no. 4, 1964, 639

TOPIC TAGS: dipole moment, germanium compound, halogenated organic compound

Abstract: The dipole moments of four monosubstituted trimethylgermanes $(CH_3)_3GeX$, where $X = F, Cl, Br, \text{ and } I$, were measured at 25° in benzene by the heterodyne method. The dipole moments found were 2.51, 2.78, 2.84, and 2.81, respectively. The investigated compounds were compared with analogous compounds of carbon and silicon, indicating that the variation of the dipole moment from fluoro-substituted to iodo-substituted compounds is of the same character as for the carbon compounds, but differs from the change in the moment in this series for silicon compounds. The ratio $\mu(R_3GeX): \mu(R_3CX)$ was an average of 1.30 for all the compounds; this was not observed for the corresponding silicon compounds. The moment of the Ge-F bond is estimated at 2.80 D. and that of the Ge-I bond at 3.10 D.

Orig. art. has 2 tables.

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L 53712-65

ACCESSION NR: AP5017167

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V.
Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 17Apr64

ENCL: 00

SUB CODE: OC, EM

NO REF SOV: 000

OTHER: 002

JPRS

Card

DR
2/2

L 19613-65 EWT(m)/EPF(c)/EWP(j)/T Pc-L/Pr-L RM

ACCESSION NP: AP5003218

S/0062/64/000/007/1209/1215

AUTHOR: Mironov, V. F.; Kravchenko, A. L.; Petrov, A. D. (Deceased)

TITLE: Synthesis of carbofunctional germanium compounds from chloromethyltri-
methyl germanium (I)

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1964, 1209-1215

TOPIC TAGS: germanium compound, chlorinated organic compound, chemical reaction,
ether, ester

ABSTRACT: Chloromethyltrimethyl germanium was used in the first synthesis of trimethylgermylmethyl alcohol, its methyl ether and several esters with acetic, acrylic, and methacrylic acids. The dimethyl ester of trimethylgermylmethylmalonic acid was also obtained. Chloromethyltrimethyl-germanium readily forms a Grignard reagent, from which were obtained trimethylgermylacetic acid, γ -butanyltrimethyl-germanium, and other compounds. When concentrated sulfuric acid was added to chloromethyltrimethyl-germanium, methane was quantitatively released and on further treatment with water, bis(chloromethyl)

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L 19613-65

ACCESSION NR: AP5003218

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tetramethylidgermanoxane was formed. Treatment with aluminum chloride led to the regrouping of chloromethyltrimethyl-germanium to ethyldimethylchlorogermanium. Reactions based on chloromethyltrimethyl-germanium show no fundamental differences from similar reactions with chloromethyltrimethyl-silane. The authors extend their gratitude to L. A. Leytes and A. A. Bugorkova for their assistance. Orig. art. has: 3 formulas and 12 graphs.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 17Dec62

ENCL: 00

SUB CODES: OC, GC

NO REF SOV: 006

OTHER: 009

JPRS

Card 2/2

L 19615-65 EWT(m)/EPF(c)/EWP(j)/T/EWP(b)/EWP(t) Pc-4/Pr-4 IJP(c)/SSD/AEDC(b)/
AFWL/RAEM(c)/ASD(a)-5/SSD(c)/RAEM(j)/RAEM(i)/ESD(ga)/ESD(t) RM/JD
ACCESSION NR: AP5003220 S/0062/64/000/007/1312/1313

AUTHOR: Yegorochkin, A. N.; Khidekel', M. L.; Razuvayev, G. A.; Mironov, V. F.;
Kravchenko, A. L.

TITLE: Proton magnetic resonance spectra of certain elemento-organic compounds ^B
of silicon and germanium

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1964, 1312-1313

TOPIC TAGS: proton, organosilicon compound, germanium compound, spectroscopy,
magnetic resonance

ABSTRACT: Comparison of proton magnetic resonance spectra of several
saturated and unsaturated organic compounds of silicon and germanium revealed
that for unsaturated compounds, the effects of $d\pi - p\pi$ - conjugation play
an appreciable role. The spectra were recorded on the JMN-3 spectrometer
using cyclohexane as the internal standard. To determine chemical shifts
in saturated compounds, cyclohexane was combined with the sample in 1:1 volume
ratio. Chemical shifts of proton signals in unsaturated compounds were
determined by subsequent dilution with cyclohexane and extrapolation of the
data to infinite dilution. It was found that chemical shifts of the CH_3 -
and CH_2 -protons in compounds not containing multiple bonds correspond to
Card 1/2

L 19615-65

ACCESSION NR: AP5003220

greater electroconductivity of germanium compared with silicon and the qualitative notions of the inductive effect of substituents. Thus, in view of the greater electron-donor capacity of the $-\text{CH}_2-\text{M}(\text{CH}_3)_3$ group, where $\text{M} = \text{Si}, \text{Ge}$, compared with that of the methyl, resonance frequencies of methylprotons in the compounds $(\text{CH}_3)_3\text{M}-(\text{CH}_2)_n-\text{M}(\text{CH}_3)_3$ are shifted toward larger values of τ with respect to the same frequencies in the $(\text{CH}_3)_4\text{M}$ compounds. Orig. art. has: 1 graph and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennon universitete (Scientific Research Institute of Chemistry at Gor'kiy State University); Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences, SSSR); Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 25Nov63

ENCL: 00

SUB CODE: OC, OP

NO REF SOV: 001

OTHER: 005

JPRS

Card 2/2

ACCESSION NR: AP4034571

8/0079/64/034/004/1356/1357

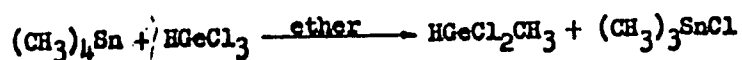
AUTHOR: Mironov, V. P.; Kravchenko, A. L.

TITLE: New method for synthesizing alkylchlorogermenes

SOURCE: Zhurnal obshchey khimii, v. 34, no. 4, 1964, 1356-1357

TOPIC TAGS: alkylchlorogermene, synthesis, trichlorogermene, tetramethyl tin, ethylchlorogermene, tetraethyl lead, methylchlorogermene, methylethylchlorogermene, trimethylethylgermane

ABSTRACT: The proposed method for synthesizing alkylchlorogermenes comprises reacting trichlorogermene with tetramethyl tin in ether:



The product yields were 80 and 70%, respectively. Ethylchlorogermene (boiling, 129.5°C at 743 mm, $n_D^{20} = 1.4750$) was obtained similarly with a 45% yield. Its yield was increased by using tetraethyl lead instead of the tetraethyl tin. Ethylene bubbled through methylchlorogermene gave methyl(ethyl)chloro-

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ACCESSION NR: AP4034571

germane (boiling 1490 at 750 mm, $n_D^{20} = 1.4660$) with a 90% yield. The latter was methylated with CH_3MgCl to form trimethyl(ethyl)germane. Orig. art. has: 2 equations.

ASSOCIATION: Institut organicheskoy khimii, Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 18Nov63

DATE ACQ: 11May64

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 003

Cord 2/2

MIRONOV, V.F.; KRAVCHENKO, A.L.; PETROV, A.D. [deceased]

Synthesis of 1,1- and 1,2-bis-(trimethylgermyl)-ethylene -
Dokl. AN SSSR 155 no. 4:843-845 Ap '64. (MIRA 7:5)

1. Institut organicheskoy khimii AN SSSR. 2. Ucheny-korrespondent
AN SSSR (for Petrov).

L 16400-65 EWT(m)/EPF(c)/EWP(j) Pc-l/Pr-l RM
 ACCESSION NR: AP4046378 S/0020/64/158/003/0656/0659

AUTHOR: Mironov, V. F.; Kravchanko, A. L.

TITLE: New preparative method for alkyldichlorogermanes and alkyltrichlorogermanes

SOURCE: AN SSSR. Doklady*, v. 158, no. 3, 1964, 656-659

TOPIC TAGS: germane, alkyldichlorogermane, alkyltrichlorogermane, methyldichlorogermane, ethyldichlorogermane, ethyltrichlorogermane

ABSTRACT: A new preparative method has been developed for alkyldichlorogermanes and alkyltrichlorogermanes. It is noted that heretofore alkyldichlorogermanes have been practically unobtainable. Methyldichlorogermane (b.p., 101.5C at 750 mm Hg) was prepared in 80% yield (on trichlorogermane) by treating tetramethyltin with trichlorogermane etherate. Ethyldichlorosilane (b.p., 130C at 747 mm Hg) was prepared in 80.5% yield by the reaction of tetraethyllead with trichlorogermane etherate. Finally, ethyltrichlorogermane (b.p., 140C at 750 mm Hg) was

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L 16400-65

ACCESSION NR: AP4046378

obtained in 90% yield from tetraethyllead and tetrachlorogermene; this last method is recommended. Structures were confirmed by elemental analysis, IR spectroscopy, and, in some cases, by derivatization. Orig. art. has: 4 figures and 8 formulas.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo
Akademi nauk SSSR (Institute of Organic Chemistry, Academy of Sciences
SSSR)

SUBMITTED: 13Apr64

ENCL: 00

SUB CODE: GC, IC

NO REF SOV: 007

OTHER: 005

Card 2/2

L 63639-65 ENT(m) JAJ/RM
ACCESSION NR: AP5017961

UR/0062/65/000/006/1026/1035
661.718.6

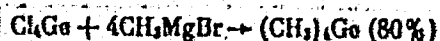
AUTHOR: Mironov, V. F.; Kravchenko, A. L.

TITLE: Synthesis of organogermanium compounds from tetramethylgermane

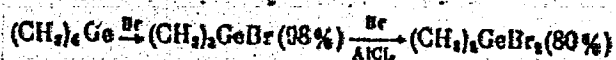
SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 6, 1965, 1026-1035

TOPIC TAGS: organogermanium compound, germane

ABSTRACT: The authors developed methods for the synthesis of trimethylgermane halides, determined their basic properties, and carried out a series of syntheses starting from these halides. Tetramethylgermane, which is required for this purpose, was prepared as follows:



The following reactions were carried out:



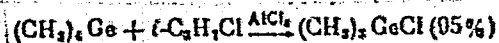
Card 1/4

L 63639-65

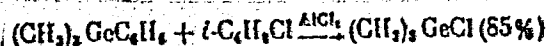
ACCESSION NR: AP5017961



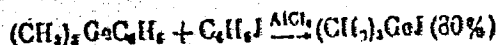
C



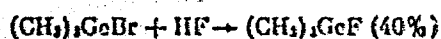
D



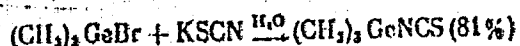
E



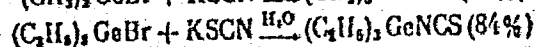
F



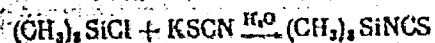
G



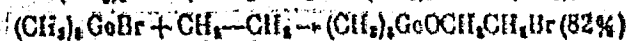
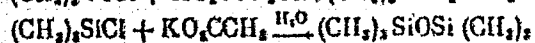
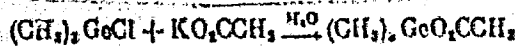
H



I



J



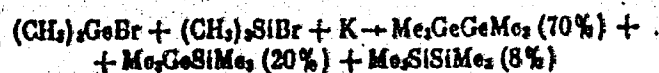
K

Card

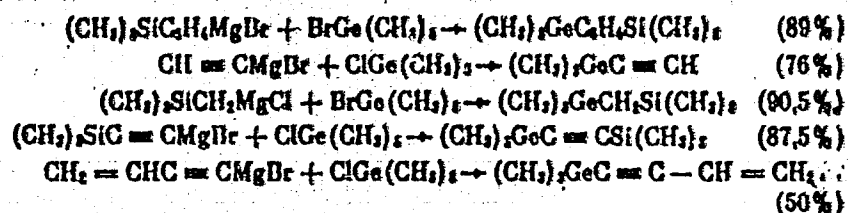
2/4

L 63639-65

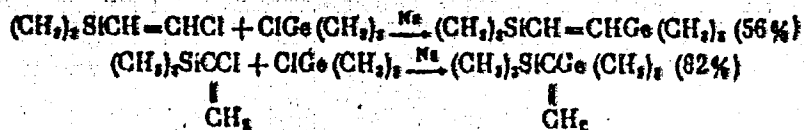
ACCESSION NR: AP5017961



L



M



N

Card 3/4

L 63639-65

ACCESSION NR: AP5017961

The synthetic procedures employed are described, and infrared spectra of the products are given. "The authors express their appreciation to L. A. Leytes for performing the spectroscopic analysis." Orig. art. has: 14 figures and 22 formulas. 2

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 07Jun63

ENCL: 00

SUB CODE: OC, G-C

NO REF SOV: 008

OTHER: 007

Card

KC
4/4

LEZHENOV, V.A.; MIKHNOV, V.F.; KRAVCHENKO, A.I.

Vacuum ultraviolet absorption spectra of vinyl compounds
containing group IV elements, Izv. AN SSSR. Ser. Khim.
no. 1:156-158 '66. (MIRA 19:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
Submitted May 12, 1965.

L 36990-66 EWP(j)/EWT(m) RM

ACC NR: AP6008508

SOURCE CODE: UR/0062/66/000/001/0156/0158

AUTHOR: Petukhov, V. A.; Mironov, V. F.; Kravchenko, A. L.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences,
SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Vacuum ultraviolet absorption spectra of vinyl compounds containing elements of group IV

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 1, 1966, 156-158

TOPIC TAGS: UV spectrum, UV absorption, absorption spectrum, vinyl compound

ABSTRACT: The authors examine the ultraviolet spectra of vinyl compounds of the type $\text{CH}_2=\text{CH}-\text{MR}_3$, M being an element of group IV and R an alkyl radical or halogen, the MR_3 group being situated in the immediate vicinity of the double bond. The investigation is performed to check the assumptions that the influence of the inductive effect of this group should be more pronounced than in the allyl compounds and therefore the indications of linking of the vacant d-orbits of the atom of M with the π -electrons of the multiple bond should increase. At the same time the authors acknowledge the possibility of weakening of the linkage of the electrons of the multiple bond with the valence electrons of the MR_3 group by virtue of the M atom being situated in the nodal plane of the wave function of the

Card 1/2

UDC: 543.422

L 36990-66

ACC NR: AP6008508

π -electrons of the multiple bonds. These characteristics of the structure of vinyl compounds determine the complex dependence of their spectra on the nature of the MR_3 substitute. The investigation revealed that substitutes of MR_3 and $C \equiv C-MR_3$ and $R_3M-C \equiv C-MR_3$ compounds cause a bathochromic effect in the ultraviolet absorption spectra. The effect of the substitutes does not agree with the $d-\pi$ -linkage mechanism and for its explanation it is necessary to take into account primarily the $\sigma-\pi$ -linkage and to a lesser degree the inductive effect. Orig. art. has: 2 figures.

SUB CODE: 07/ SUBM DATE: 12May65/ ORIG REF: 001/ OTH REF: 000

Card 2/2 *KS*

ACC NR: AP7006026

SOURCE CODE: UR/0062/66/000/007/1177/1184

AUTHOR: Mironov, V. F.; Kravchenko, A. L.; Leytes, L. A.

ORG: Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Science USSR
(Institut organicheskoy khimii AN SSSR)

TITLE: Synthesis and spectra of silylgermyl- and digermyl- substituted ethylenes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1966; 1177-1184

TOPIC TAGS: organic synthetic process, organogermanium compound, organosilicon compound, ethylene

ABSTRACT: Nonsymmetrical silyl-, germyl- and digermyl-substituted ethylenes of the types $R_3MCH=CHMR_3$ and $(R_3M)_2C=CH_2$, where $M = Si$ and Ge , were synthesized. Substantial exaltation of molecular refraction was observed for 1, 2-substituted ethylenes, but not for 1, 1-substituted ethylenes, evidently as a result of the increased polarization of the molecules of the former, due to interaction of the pi-electrons of the double bonds with the vacant d-orbitals of the silicon or germanium atoms. The reactivity of disubstituted ethylenes in ionic addition reactions also increase together with the increasing exaltation of the molecular refraction. The infrared and Raman spectra of these compounds were studied, and it was established that 1, 2-digermylethylenes, just like 1,2-disilylethylenes, possessed a centrosymmetrical trans-configuration. In the silylgermyl-substituted ethylene molecule, there is no center of symmetry, a situation reflected in its spectra. Orig. art. has: 4 figures, 9 formulas and 3 tables. [JPRS: 38,967]

SUB CODE: 07 / SUBM DATE: 29Jan64 / ORIG REF: 014

Card 1/1

UDC: 542.91 + 543.422 + 546.287 + 661.718.6

09270811

DNEPRENKO, K.V.; KRAVCHENKO, A.M.

Portable instrument with photoresistance for the determination
of the moisture content of gases. Gaz. prom. 8 no.11:16-19 '63.
(MIRA 17:11)

IZMAYLOV, N.A., prof., zasluzhennyy deyatel' nauki, otv.red.; KRAVCHENKO,
A.N., red.; OVCHARENKO, N.N., kand.khim.nauk, red.; DUBINSKIY,
G.P., dotsent, red.; KOVALEV, P.V., dotsent, red.; TRET'YAKOVA,
A.N., red.; POGOZHEV, P.P., tekhn.red.

[In the open spaces of the wonderful motherland; collection from the
Departments of Physical Education and Sports, and General Physical
Geography of Kharkov University and the Kharkov Mountaineering Section]
Na prostorakh rodiny chudesnoi; sbornik kafedry fizicheskogo vospitaniia
i sporta i obshchei fizicheskoi geografii Khar'kovskogo ordena Trudovogo
Krasnogo Znameni gosudarstvennogo universiteta imeni A.M.Gor'kogo,
khar'kovskoi gorodskoi sektsii al'pinizma. Khar'kov, Izd-vo Khar'kovsko-
go gos.univ., 1959. 397 p. (MIRA 13:12)

(Mountaineering)

(Tourism)

(Physical geography)

BUKHALO, S.M., doktor ekonom. nauk; GENSIRUK, S.A., kand. sel'skokhoz.
nauk; KHAYCHENKO, A.N., gornyy inzh.

Reduce the consumption of wood materials in the coal industry
of the Ukraine. Ugol' Ukr. 7 no.7:31-33 J1 '63. (MIRA 16:8)

(Ukraine—Wood)

L 4543-66 ENT(1) 00

ACC NR: AT6020422 (N) SOURCE CODE: UR/0000/65/000/000/0027/0035

AUTHOR: Milyakh, A. N.; Kravchenko, A. N.

70
E+1

ORG: Institute of Electrodynamics, AN UkrSSR (Institut elektrodinamiki AN UkrSSR)

TITLE: Three phase gyrators at industrial frequencies

SOURCE: AN UkrSSR. Preobrazovaniye i stabilizatsiya elektromagnitnykh protsessov (Conversion and stabilization of electromagnetic processes). Kiev, Naukova dumka, 1965, 27-35

TOPIC TAGS: gyrator, electric transformer, electromagnetism, SHF, ferrite, *electronic circuit, waveguide element*

ABSTRACT: A fifth element, called a gyrator, has been added to the usual electrical circuit elements of resistance R, inductance L, capacitance C, and mutual inductance L_{12} . The gyrator is, in principle, a passive element, since it satisfies no mutual-ity principle. Gyrator use has become widespread in the past 10 years in super-high frequency engineering of waveguide elements with nonreversible gating properties. Ferrites are usually used as gyrators in the super-high frequency range. It is extremely attractive to make a nonreversible electromagnetic device of the gyrator type to function at the industrial frequency of 50 cps. The article proceeds to describe one of the possible principles involved in building multiphase nonreversible devices and also describes their basic properties. The field of a device consisting of two

Card 1/2

L 15433-66

ACC NR: AT6020422

three phase concentric windings in air (an air transformer) displaced by an appropriate angle was investigated. Two operating conditions were established. Electromagnetic excitation was transmitted to the rotating magnetic field in the same direction in both cases, resulting in different trajectories for each case, and establishing the nonreversibility of the transmission process, so that three phase devices with rotating magnetic fields can be called nonreversible devices. Electromagnetic processes in the air transformer are no different from those occurring in the transformer consisting of a three phase braked wound rotor induction motor, field excitation conditions being the same. The processes occurring in the latter are examined. A method for making a three phase transformer with nonreversible properties, consisting of a transformer with a rotating magnetic field and condensers, is described and is suggested as a three phase gyrator at industrial frequency. Org. art. has: 3 figures and 13 formulas.

SUB CODE: 09, 20 / SUBM DATE: 26 Oct 65 / ORIG REF: 006

Card 2/2

KRAVCHENKO, A. N., inzh.

Automatic control of industrial processes in the Karaganda mines.

Izv. vys. ucheb. zav.; gor. zhur. 6 no.10:176-178 '63.

(MIRA 17:2)

POSTNIKOV, I.M., doktor tekhn.nauk, prof. (Kiyev); NIZHNIK, L.P., kand.fiz.-
matem.nauk (Kiyev); BEREZOVSKIY, A.A., kand.fiz.-matem.nauk (Kiyev);
KRAVCHENKO, A.N., inzh. (Kiyev)

Calculation of a traveling electromagnetic field in a lamellar
conductive medium. Elektrichestvo no.9:1-7 S '65.

(MIRA 18:10)

BEREZOVSKIY, Arnol'd Anatol'yevich; KRAVCHENKO, Adol'f Nikitovich

[Nonlinear boundary problems of an electromagnetic field]
O nelineinykh kraevykh zadachakh elektromagnitnogo polia.
Kiev, Izd-vo AN USSR, 1963. 73 p. (MIRA 17:9)

KRAVCHENKO, A.P.

Spectral analysis of iron powder for silicon and manganese.
Zav. lab. 31 no.11:1348 '65. (MIRA 19:1)

1. Dneprovskiy alyuminevyy zavod imeni Kirova.

KRAVCHENKO, A. P.

1. Tannins of grapes and their diffusion into wine. A. M. Korotkevich, L. I. Gubonina, and A. P. Kravchenko (All-Union Sci. Research Inst. Viticulture and Winemaking, "Magarach," Yalta, Crimea). *Bull. Acad. Sci. USSR, Div. Chem. Sci., Ser. B, No. 10* (1945) for data. of the total amt. of tannins (II) in grapes and wine was modified to det. separately the tannin (II) and the coloring substances (III) constituting I. In 40 different red varieties of grapes investigated the amt. of I varied from 205 to 2220 mg/100 g berries with an av. of 1577 mg. for 1945 (dry summer) and 1485 mg. for 1947 vintage (normal weather), resp.; the amt. of I per 100 g. of peels was on an av. 3.5 and 1.96, while that of seeds was 17.7 and 0.9 g., resp. Nearly 1/2 of I of grapes are located in the seeds. In peels, the amt. of III was 3.4% (in 1946) and 8.0% of I (in 1947). From 2 to 46% of the grape I diffused into wine during the fermentation, mainly at the expense of the peel's I. The diffusion was increased by a thorough crushing of the grape peels and seeds, by warming the grape pulp, and by increasing the alc. content of the medium to 10-15%. In wines, the amt. of II and III varied from 0.35 and 0.05 to 2.04 and 0.34, with an av. of 1.03 and 0.16 g. I, resp. The amt. of III in some wines was as high as 23% of I.

E. Wierzbicki

MARGOLIS, L.D.; KRAVCHENKO, A.P.; MUZYCHENKO, V.V.

Flame photometry determination of sodium oxide in slimes of
alumina production. Zav. lab. 28 no.9:1072-1075 '62.
(MIRA 16:6)

1. Dneprovskiy alyuminiyevyy zavod im. S.M. Kirova.
(Sodium oxide) (Flame photometry)

KRAVCHENKO, A.S., Cand Med Sci--(diss) "Blood changes in tuberculous meningitis patients treated with streptomycin, PASA, and phtivaside." Odessa, 1958. 13 pp (Odessa State Med Inst im N.I. Pirogov), 150 copies (KL,30-58,132)

145

KRAVCHENKO, A.S., inzh.

Screw-conveyor type sugar beet cleaner. Trakt. i sel'khoz mash. no.5:
28-31 My '59. (MIRA 12:6)

1. Spetsial'noye konstruktorskoye byuro zavoda im. Voroshilova.
(Sugar beets--Harvesting)

KRAVCHENKO, A.S., inzh.

Automatic steering of a sugar beet combine along rows.

Trakt. 1 sel'khoz mash. 33 no.10:34-35 0 '63.

(MIRA 17:1)

1. Spetsial'noye konstruktorskoye byuro Dnepropetrovskogo zavoda sel'skokhozyaystvennykh mashin.

KRAVCHENKO, A.S., inzh.

Automatic switching-on of electric lighting. Prom. energ. 19
no.1:11-12 Ja '64. (MIRA 17:2)

KRAVCHENKO, A.S., inzh.

Regulation of jet relays in the cooling systems of high-frequency devices with electronic generators. Prom. energ. 10
no.6:13-14 Je'64 (MIRA-1747)

KRAVCHENKO, A., COL

PA 40/49T13

USSR/Aeronautics

Feb 49

Airplanes, Fighter

Airplanes - Maneuverability

"Fighter's Vertical Maneuver," Col A. Kravchenko,
5 pp

"Test Vozdush Flota" No 2

Describes "vertical maneuvering" as best means to
attain high speeds. Briefly mentions some of the
designers responsible for high-speed vertical tactics,
and generalizes success of this mode of flying dur-
ing World War II. Claims Soviets were first to
employ "vertical maneuvering" with jet aircraft.

40/49T13

KRAVCHENKO, A., COL

Pg. 173F3

USSR/Aeronautics - Combat Formations

Oct 49

"Changes in Combat Formations of Soviet Fighters," Col A. Kravchenko

"Vest Vozdush Flota" No 10, pp 7-13

Reviews development of combat formations from World War I to now. Describes no definite combat method or formation. Pays special attention to combat formations using aircraft pair as smallest formation. Discusses advantages of this system and claims Soviet priority for development and application.

173F3

KRAVCHENKO, A., COL

Pa. 173T13

USSR/Aeronautics - Flying

Feb 50

"Chkalov's School of Flying Skill," Col A. Kravchenko

"Vest Vozdush Flota" No 2, pp 29-34

Describes activity of V. P. Chkalov and his flying methods, such as complex execution of advanced and acrobatic maneuvers, aerial fire from any position of airplane, precise landing. Largely devoted to glorifying Stalin, Communist Party, Soviet govt and their achievements in avn.

173T13

KRAVCHENKO, A.. polkovnik.

Documentary film on the might of Stalinist aviation and the
skill of its personnel. Vest.Vozd.Fl. 34 no.12:83-84 D '51.
(Russia--Air Force)(Motion pictures, (MLRA 8:3)
Documentary)

KRAVCHENKO A

AID P - 3478

Subject : USSR/Aeronautics
Card 1/1 Pub. 135 - 13/20
Author : Kravchenko, A., Col., Dotsent, Kand. of Tech. Sci.
Title : ~~USSR/Aeronautics~~
: Combats of the Soviet Air Force at the beginning of
the Great Patriotic War (World War II)
Periodical : Vest. voz. flota, 12, 64-70, D 1955
Abstract : The author describes the military action of the Soviet
Air Force on various fronts in 1941. He mentions names
of well known flyers and several types of aircraft.
Institution : None
Submitted : No date

KRAVCHENKO, A.

84-11-21/36

AUTHOR: Kravchenko, A., Engineer

TITLE: Antennas for Ground-to-Air Transmission (Peredayushchiye antennoy dlya svyazi s samoletami)

PERIODICAL: Grazhdanskaya aviatsiya, 1957, Nr 11, pp. 22-24 (USSR)

ABSTRACT: Properties of wide-band horizontal dipoles and V-shaped horizontal antennas under different circumstances of communication with air from the area air traffic centers, are discussed. Wavelengths of 50, 80, 120 and 140 m are considered in respect to the directionality, at ranges of 200, 400 and 600 km. The conclusion is that two antennas, one for daytime, the other for night use, are necessary at the traffic centers to insure round-the-clock service. If the flights in the area are confined to certain directions only, two suitably oriented dipoles will meet the requirements. If all directions are involved, a V-antenna is used during the daytime. The antennas are suspended 19 m above the ground for distances of the order of 600 km., and 16 m for distances of about 400 km.

Card 1/2

84-11-21/36

Antennas for Ground-to-Air Transmission (Cont.)

A table shows the wavebands and the usable dipoles, depending on the traveling wave ratios. Three sets of diagrams accompany the text, showing the directionality characteristics of two types of dipoles and V antennas at different wavebands.

AVAILABLE: Library of Congress

Card 2/2

KRAVCHENKO, A. S.

86-10-33/44

AUTHOR: Kravchenko, A. S., Col, Dotsent, Candid. of Mil. Sciences

TITLE: The Improved Air Force Tactics in the Years of the Great Patriotic War (Sovershenstvovaniye taktiki VVS v gody Velikoy Otechestvennoy voyny)

PERIODICAL: Vestnik Vozdushnogo Flota, 1957, Nr 10, pp. 49-55 (USSR)

ABSTRACT: In this article the author gives a condensed review of the development of the Soviet Air Force tactics during the Great Patriotic War. The author states that during the first period of war the Soviet Air Force had to carry out its combat missions under exceptionally difficult circumstances. A considerably high percentage of obsolete aircraft, the limited use of radio communications for the control of aircraft from the ground and in the air, too frequent shifting of air force units from one airfield to another, the dispersed actions of air force units in the area of entire front line, and the exceptionally heavy strain placed on the personnel, lessened considerably the combat capabilities of the Air Force and gave the initiative to the enemy air force. Because of that, the overall actions of the Soviet Air Force during the first period

CARD 1/3

86-10-33/44

The Improved Air Force Tactics in the Years of the Great Patriotic War (Cont.)

of war were limited to the support of ground troops only. Thanks to the initiative of commanders and to the arrival of new types of aircraft, an improvement in the Air Force tactics began. In the fighter aviation the number of aircraft in the flights was increased from 3 to 4 aircraft, which enabled the fighter pilots to operate in pairs. The pilots learned how to use the high maneuvering capabilities of new aircraft, and vertical maneuvers were mainly used in air battles. The fighter formations became more dispersed and the flights in formations were echeloned at greater altitudes above each other. For the escort of bombers and shturmoviks the fighter formations consisted of the following tactical subdivisions: the striking force, the air cover, and the reserve. During the war the bombers began to deliver concentrated blows against the targets in the most important directions. They bombed strongly fortified and small-size targets. "Circle", "eight", and "vane" type tactical maneuvers were applied. The targets were attacked on several approaches. The attack of dive bombers became more accurate.

CARD 2/3

86-10-33/44

The Improved Air Force Tactics in the Years of the Great Patriotic War (Cont.)

Contour flying for the approach of targets was used by the shturmoviks. Shortly before the target the shturmoviks zoomed to an altitude of 600 - 800 m and then attacked the target from a dive. For repeated attacks the combat order "circle" was used. The shturmoviks attacked not only the targets on the battlefield, but carried out attacks also against the airfields, railroad stations, stores and other objectives in the enemy rear. Thanks to a wider use of radio communications, the combat missions were carried out by all branches of the air force more successfully, particularly by the fighter aviation. One photo.

AVAILABLE: Library of Congress

CARD 3/3

KRAVCHENKO, A.S., general-mayor aviatsii, dotsent, kand.voyennykh nauk
SHISHOV, L.M., polkovnik, Geroy Sovetskogo Soyuz, dotsent, kand.
voyennykh nauk.

Lenin's concern for the creation of the Soviet Air Force.
Vest.Vozd.Fl. -ap.4:13-21 Ap '60. (MIRA 13:8)
(Lenin, Vladimir Il'ich, 1870-1924)
(Russia--Air force)

KRAVCHENKO, A., mayor

Resourcefulness and ability. Voen. znan. 36 no.9:11-12 S '60.

(MIRA 13:9)

(Tactics)

KRAVCHENKO, A.S., general-mayor aviatsii

Commander and technology. *Vest. Vozd.* Fl. no.5:27-28 My '61.
(MIRA 14:8)

(Russia—Air force)

I 20724-65 EWT(d)/EWT(m)/FA/EWP(h) AFAL/SSD LBF

ACCESSION NR: AP4049503

S/0209/64/000/011/0042/0049

AUTHOR: Kravchenko, A. (Air Force Major General, Professor)

TITLE: A change in the techniques of military aviation 4

SOURCE: Aviatziya i kosmonavtika, no. 11, 1964, 42-49

TOPIC TAGS: military aviation, aerial warfare, ground support, tactical air force, aircraft speed, atomic bomb

ABSTRACT: The author commences with a summary of the history of military aviation and gives the speeds of various types of military aircraft at various stages in their development. He points out that nuclear weapons and rockets of various kinds were introduced with the advent of supersonic flight. The author comments that while various branches of the military have applied nuclear weapons and rockets to the destruction of large stationary objects, military aviation has been faced with the task of destroying large movable objects such as combat aircraft carriers, rocket-carrying submarines, etc., which constitute great danger to military and industrial targets, cities and populations. A paragraph is devoted to targets and the capabilities for seeking them out. The author states that the arming of planes with nuclear weapons greatly influenced the composition and form of combat aviation. This is followed by an analysis of the composition and methods of the

Card 1/2

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ACCESSION NR: AP4049503

Soviet Air Force, as well as of the difficulties that might be encountered over various terrains. The author comments on supersonic aircraft flying at 60,000 meters. Since high speeds result in high rates of fuel consumption, all planes must be designed and built carefully with no errors permissible. The author also stresses that the time element has become of the utmost importance, and that this calls for high-caliber commanders. He makes a point of the fact that while the proper political orientation must be carried on as an important command criterion, commanders and their personnel must be highly-qualified technically as well. Orig. art. has: 4 photographs.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MS, AC

NO REF SOV: 000

OTHER: 000

Card 2/2

YUDOVICH, V.G.; KHABERODOV, A.D.; SOLOVYEV, Y.A.; VIKTOROV, V.I.;
PANOV, F.S.; BELYAYEV, A.N.; ALADIN, O.I.; CHIRIK, I.I.;
VOROB'YEV, A.I.; PRIGOR'YEV, Yu.V.; SOLOV'YEV, Ya.A.;
KUZ'MIN, A.V.; ZHIDONIS, V.D.; ZOLIN, A.V.; KATSOV, V.I.;
DOBROSLAVSKIY, V.I.; TROFIMOV, Ye.N.; DRYAGIN, Ye.R.;
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period. One may consider the method in
prophylaxis the most effective tests with
killing influenza. Immunization virus
formol-killed and living influenza virus
58/4912

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were carried out at Inst of Virology in the
laboratory of Prof Smorodintsev and by foreign
scientists. Results indicated that specific
prophylaxis for influenza can actually be
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